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A Parallel Workstation for Computational Fluid and  
Plasma Dynamics Research  
AFOSR Grant F49620-99-1-0164  
Final Report

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August, 2001

### **Equipment Purchased**

The equipment purchased under this grant was a SGI Origin 2000 16 processor (R10K chips) machine with 12GB memory. The purchase price was \$246701, with \$131578 being charged to the grant, and the remaining cost-shared by the University of Michigan. There were no special circumstances regarding the acquisition, nor any changes to the equipment list.

### **Impact of the Equipment on Research Program**

This machine has played a key role in the research being done in the W. M. Keck Foundation Computational Fluid Dynamics Laboratory and the Center for Space Environment Modeling. It has been used by the four faculty members listed above, four research scientists working under them, and numerous graduate students in aerospace engineering and space sciences. Projects that have utilized the machine include:

- Hypersonic Aeroelasticity (AFOSR funded work)
- Space-Weather Modeling (NSF funded work)
- Supernova Modeling (NASA funded work)
- Ionospheric Modeling (NASA funded work)

The machine was also instrumental in our preparation of a successful proposal to the Air Force MURI program.